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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,098	02/02/2004	Suresh Balasubramanian	TI-36686	5761
23494	7590	07/27/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			YOHA, CONNIE C	
			ART UNIT	PAPER NUMBER
			2827	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/768,098

Applicant(s)

BALASUBRAMANIAN ET AL.

Examiner

Connie C. Yoha

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 8-11 is/are rejected.
- 7) ☐ Claim(s) 3-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


CONNIE C. YOHA
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-11 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-2, 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Becker et al, Pat. No. 6597613.

With regard to claim 1, Becker discloses a memory system comprising: a memory array (fig. 1A, 100) containing a first plurality of cells, each of first plurality of cells inherently storing a corresponding one of a plurality of values; a decoding circuit (fig. 1A, 102, 104) selectively coupling a first cell to a bit line according to an access address, wherein said first cell is comprised in said plurality of cells; and a sense amplifier (fig. 1A, 106) determining whether a current path is present on said bit line, said sense amplifier generating a first logical value as an output if said current path is present on said bit line and another logical value as said output otherwise, wherein said output represents a data value stored in said first cell (col. 4, line 25-42) (also with regard to claim 11).

With regard to claim 2, Becker discloses wherein said first cell is designed to provide an open path to said bit line if said another logical value is stored and a closed path to said bit line if said first logical value is stored (col. 7, line 17-57).

With regard to claim 8, Becker discloses wherein said memory array is provided in the form of a plurality of rows and a plurality of columns (col. 1, line 19-23) (also with regard to claim 9), said decoding circuit comprising: a row decoder (fig. 1A, 102) to select one of said plurality of rows (col. 1, line 33-35); and a column decoder (fig. 1A, 104) to select one of said plurality of columns (col. 1, line 35-36).

With regard to claim 10, Becker discloses the memory system further comprising of a latch (fig. 1A, 108) coupled to said output of said sense amplifier.

Allowable Subject Matter

3. Claim 3-7 are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not show the limitation of the detailed structure of the sense amplifier having a first transistor, with it's gate terminal connected to a sense enable signal, a second transistor and a third transistor forming a current mirror, with their drain terminal being connected to a source terminal of the first transistor and a gate terminal of the second transistor being connected to a gate terminal of the third transistor, the gate terminal of the second transistor also being connected to a source terminal of the second transistor at a first node, said bit line also being connected to said first node; a

Art Unit: 2827

fourth transistor having a gate terminal connected to the sense enable signal, a drain terminal of the fourth transistor being connected to the first node; a resistor being connected to a source terminal of the third transistor at a second node; and an inverter having an input coupled to the second node, wherein an output of the inverter represents said output of the sense amplifier.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Poeidomani et al (6856547), Tanzawa et al (6734719) and Fujiwara et al (5737273) disclose a memory device having sense amplifier.

5. When responding to the office action, Applicant's are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

6. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-1799. The examiner can normally be reached on Mon. - Fri. from 8:00 A.M. to 5:30 PM. The examiner's supervisor, David Nelms, can be reached at (571) 272-1787. The fax phone number for this Group is (703) 872-9306. Any inquiry of a general nature or relating to

Art Unit: 2827

the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-0956.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov> should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



C. Yoha

July 2005



**CONNIE C. YOH
PRIMARY EXAMINER**